

Appl. No. 09/976,516
Amendment dated July 24, 2006
Reply to Office Action of May 26, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Currently amended) The method of ~~claim 1~~ claim 9, wherein the interrupting step comprises the step of discarding a later data packet from the originator.
3. (Currently amended) The method of ~~claim 1~~ claim 9, wherein the interrupting step comprises the step of sending a command to ~~an~~ the upstream router to intercept future data packets from the originator.
4. (Currently amended) The method of ~~claim 1~~ claim 9, wherein the interrupting step comprises the step of forwarding an agent to ~~an~~ the upstream router, the agent arranged to intercept future data packets from the originator.
5. (Currently amended) The method of ~~claim 1~~ claim 9, wherein the determining step comprises the step of checking for a potential presence of at least one of a worm, a virus, and a Trojan horse.

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6. (Currently amended) The method of ~~claim 1~~ claim 9, wherein the monitoring step comprises at least one of the steps of:

- random sampling of a subset of data packets;
- monitoring data packets having a predetermined source address;
- monitoring data packets having a predetermined destination address; and
- monitoring data packets having a predetermined combination of source and destination address.

7. (Currently amended) The method of ~~claim 1~~ claim 9, wherein the determining step comprises the steps of:

- determining that a first data packet is suspicious; and
- in response to determining that the first data packet is suspicious, deciding to monitor future data packets having at least one of a source address and a destination address matching, respectively, the source address and the destination address of the first data packet.

8. (Currently amended) The method of ~~claim 1~~ claim 9, wherein the interrupting step comprises the step of collaborating with ~~an~~ the upstream router to cause the upstream router to update its capabilities to detect a potentially harmful data packet.

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9. (Previously Presented) A method for providing node security in a router of a packet network, comprising the steps of:

monitoring a data packet sent from an originator via the router and addressed to a destination device other than the router;

determining in the router whether the data packet is potentially harmful to the destination device;

interrupting transmission of the data packet in response to determining that the data packet is potentially harmful to the destination device, the interrupting further comprising the step of communicating with a second router to cause the second router to interrupt transmission of a future data packet; and

transmitting the data packet in response to determining that the data packet is not potentially harmful to the destination device, wherein the interrupting step comprises the step of collaborating with an upstream router that is not a neighbor of the router to have the upstream router block transmissions from the originator.

10. (Original) The method of claim of 9, wherein the interrupting step further comprises the step of identifying the upstream router by sending a command to the originator, the command requesting address information from participating routers.

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11. (Currently amended) A router for providing node security in a packet network, comprising:

a plurality of I/O ports for accepting a data packet sent from an originator via the router and addressed to a destination device other than the router, and for transmitting the data packet to the destination device; and

a processor coupled to the plurality of I/O ports for processing the data packet;

wherein the processor is programmed to:

monitor the data packet;

determine whether the data packet is potentially harmful to the destination device;

interrupt transmission of the data packet in response to determining that the data packet is potentially harmful to the destination device, including communicating with a second router to cause the second router to interrupt transmission of a future data packet; and

transmit the data packet in response to determining that the data packet is not potentially harmful to the destination device,

wherein the processor is further programmed to collaborate with an upstream router that is not a neighbor of the router to have the upstream router block transmissions from the originator.

12. (Currently amended) The router of claim 11, wherein, in response to ~~interrupting the data packet~~ determining that the data packet is potentially harmful to the destination device, the processor is further programmed to discard a later data packet from the originator.

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13. (Currently amended) The router of claim 11, wherein, in response to ~~interrupting the data packet~~ determining that the data packet is potentially harmful to the destination device, the processor is further programmed to send a command to ~~an~~ the upstream router to intercept future data packets from the originator.

14. (Currently amended) The router of claim 11, wherein, in response to ~~interrupting the data packet~~ determining that the data packet is potentially harmful to the destination device, the processor is further programmed to forward an agent to ~~an~~ the upstream router, the agent arranged to intercept future data packets from the originator.

15. (Original) The router of claim 11, wherein the processor is further programmed to check for a potential presence of at least one of a worm, a virus, and a Trojan horse.

16. (Original) The router of claim 11, wherein the processor is further programmed to at least one of:

random sample a subset of data packets;

monitor data packets having a predetermined source address;

monitor data packets having a predetermined destination address; and

monitor data packets having a predetermined combination of source and destination address.

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17. (Original) The router of claim 11, wherein the processor is further programmed, in response to determining that a first data packet is suspicious, to decide to monitor future data packets having at least one of a source address and a destination address matching, respectively, the source address and the destination address of the first data packet.

18. (Currently amended) The router of claim 11, wherein the processor is further programmed to collaborate with ~~an~~ the upstream router to cause the upstream router to update its capabilities to detect a potentially harmful data packet.

19. (Canceled)

20. (Currently amended) The router of ~~claim of 19~~ claim 11, wherein the processor is further programmed to identify the upstream router by sending a command to the originator, the command requesting address information from participating routers.

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21. (Currently amended) A method for providing node security in a router of a packet network,

comprising the steps of:

monitoring a data packet sent from an originator via the router and addressed to a
destination device other than the router;

determining in the router whether the data packet is potentially harmful to the destination
device;

interrupting transmission of the data packet in response to determining that the data
packet is potentially harmful to the destination device, the interrupting further comprising the
step of communicating with a second router to cause the second router to interrupt transmission
of a future data packet; and

transmitting the data packet in response to determining that the data packet is not
potentially harmful to the destination device ~~The method of claim 1~~

wherein the determining in the router whether the data packet is potentially harmful to the destination device further comprises determining in the router, without using information originated by the destination device, whether the data packet is potentially harmful to the destination device.

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22. (Currently amended) A router for providing node security in a packet network, comprising:

a plurality of I/O ports for accepting a data packet sent from an originator via the router
and addressed to a destination device other than the router, and for transmitting the data packet to
the destination device; and

a processor coupled to the plurality of I/O ports for processing the data packet;
wherein the processor is programmed to:

monitor the data packet;

determine whether the data packet is potentially harmful to the destination device;

interrupt transmission of the data packet in response to determining that the data packet is
potentially harmful to the destination device, including communicating with a second router to
cause the second router to interrupt transmission of a future data packet; and

transmit the data packet in response to determining that the data packet is not potentially
harmful to the destination device.

~~The router of claim 11~~ wherein the processor is further programmed to determine,
without relying on information originated by the destination device, whether the data packet is
potentially harmful to the destination device.
